

FACTSHEET – Real-life 5G case studies (Hardell, Nilsson)

Published REAL-LIFE 5G Case Studies

Published case-studies demonstrate the real-life effect of 5G on human health.

All studies are by oncologist and researcher **Lennart Hardell** from the Research Foundation for Environment & Cancer and **Mona Nilsson** from the Radiation Protection Foundation.

CASE-STUDY #1

Case Report: The Microwave Syndrome after Installation of 5G Emphasizes the Need for Protection from Radiofrequency Radiation, (Hardell, Nilsson, Published 10-Jan-2023)

Annals of Clinical and Medical Case Reports https://www.gavinpublishers.com/assets/articles_pdf/Case-Report-The-Microwave-Syndrome-after--Installation-of-5G-Emphasizes-the-Need-for--Protection-from-Radiofrequency-Radiation.pdf

“In this case, report two previously healthy persons, a man aged 63 years and a woman aged 62 years, developed symptoms of the microwave syndrome after installation of a 5G base station for wireless communication on the roof above their apartment.”

The first ever study of the health effects of 5G radiation on humans shows that 5G causes typical symptoms of microwave syndrome as well as a massive increase in microwave radiation. The case study also confirms once again that radiation well below levels allowed by the authorities causes ill health.

CASE-STUDY #2

Development of Microwave Syndrome in 2 Men after Installation of 5G on Roof above office (Nilsson and Hardell, Published 04-Feb-2023)

Annals of Clinical Case Reports <https://www.anncaserep.com/abstract.php?aid=9589>
<https://www.anncaserep.com/open-access/development-of-the-microwave-syndrome-in-two-men-shortly-after-9589.pdf>

The clinical picture in both men was clearly related to the exposure, although the exposures were well below the guidelines recommended by ICNIRP that are claimed to protect against all health effects. We conclude that the guidelines for RFR exposure based only on tissue heating by ICNIRP are inadequate to protect human health and that 5G appears to provoke symptoms of microwave syndrome in previously healthy people.

“In this case study we describe two men, case 1 and case 2, working in three office rooms close to base stations. After the deployment of 5G, both men developed symptoms typical for the microwave syndrome, e.g., headache, tinnitus, dizziness, balance disorder, concentration and attention deficiency, and fatigue.”

Also covered in this article

Two studies show that 5G caused the microwave syndrome in healthy persons

<https://www.stralskyddsstiftelsen.se/two-studies-show-that-5g-caused-the-microwave-syndrome-in-healthy-persons/?fbclid=IwAR2Gfg7A15P19tdjNdZ9CI22oND-wn7OJFNdQ6eMHoLD5WI75cH6Hx77m5c>

'A new case study shows that installing a 5G base station on the roof above an office caused symptoms of microwave syndrome in two previously healthy men. The study is in line with a previous case study that also showed that 5G rapidly caused microwave syndrome in previously healthy people. These appear to be the first two studies in the world on the health effects of exposure to real 5G.'

CASE-STUDY #3

Case Report - 52-Year Healthy Woman Developed Severe Microwave Syndrome (Hardell, Nilsson Published 10-Apr-2023) <https://www.acmcaseport.com/pdf/ACMCR-v10-1926.pdf>

“In this case report we present a woman aged 52 years who developed health problems consistent with the microwave syndrome after installation of a 5G base station facing her apartment at 60 meters’ distance. These symptoms consisted of e.g., headache, dizziness, concentration difficulties, fatigue, arrhythmia, skin burning and nose bleeding corresponding to the microwave syndrome”

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CASE-STUDY #4

Case Report - 5G Radiofrequency Radiation Caused the Microwave Syndrome in a Family Living Close to the Base Stations (Nilsson, Hardell, Published 30-June-2023)

<http://www.fortunejournals.com/articles/5g-radiofrequency-radiation-caused-the-microwave-syndrome-in-a-family-living-close-to-the-base-stations.html>

<https://www.fortunejournals.com/articles/5g-radiofrequency-radiation-caused-the-microwave-syndrome-in-a-family-living-close-to-the-base-stations.pdf>

The study was published in the Journal of Cancer Sciences and Clinical Therapies.

“In this article we present a new case study of a family including three persons, a woman 55 years, a 20-year-old man and a 19-year-old woman. The fourth family member, the father, did not participate. All live in an apartment with two 5G/4G base stations directed towards their apartment, one at a distance of around 50 meters and the second at a distance of around 70 meters. The base stations are placed on the roof of two adjacent 6-floor buildings. The apartment of the family is located at a slightly lower height, on the fourth floor, in another building across the street”

Base stations for 3G/4G had been active in the same locations and were upgraded July-2021 and May-2022. The family members had several symptoms typical of microwave syndrome, the most severe being in the young woman, who had already had some health issues prior to the 5G-upgrade, but experienced worsened health symptoms after the deployment. Symptoms included sleeping problems, headache, concentration and memory problems, skin disorders, irregular heartbeat, light sensitivity, anxiety and panic attacks. Reported in <https://ehtrust.org/case-study-published-5g-health-effects-to-family-living-close-to-5g-cell-antennas/>

CASE-STUDY #5

Case Report - A 49-Year-Old Man Developed Severe Microwave Syndrome after Activation of 5G Base Station 20 Meters from his Apartment

Mona Nilsson, Lennart Hardell, Journal of Community Medicine & Public Health, Published 13-Nov-2023

https://radiationprotection.se/wp-content/uploads/2023/11/microwave-syndrome_man49years_Nilsson_Hardell_nov2023.pdf

“The deployment of the fifth generation, 5G, for wireless communication has been rolled out in Sweden since 2019/2020. This has caused increased high-pulsed Radiofrequency (RF) radiation. In four case reports we have described persons that developed the microwave syndrome soon after installation of 5G base stations close to their residence or office. In this new case report a 49-year old previously healthy man is described. A 5G base station was installed 20 meters from his apartment. He rather immediately developed a variety of symptoms that are part of the microwave syndrome. Most severe were headache, dysesthesia (abnormal sensation), loss of immediate memory, high and irregular pulse, chest squeeze, burning and lancinating skin. Very high RF radiation was measured in his apartment, however much lower than the limits recommended by the International Commission on Non-Ionizing Radiation Protection (ICNIRP). After moving to another apartment with low RF radiation the symptoms disappeared or decreased within a short time period but they reappear whenever he returns to his apartment close to the 5G antennas. This must be regarded as a provocation test on health and 5G radiation.”

https://radiationprotection.se/5g/fifth-case-study-shows-5g-rapidly-caused-harmful-health-effects/?fbclid=IwAR3mxznwewN4UVHScHXD4sEICI2fV7I95rU_FpO41X6c0Z-rBUW48db8YJ0

CASE-STUDY #6

Case Report - Both Parents and their Three Children Developed Symptoms of the Microwave Syndrome while on Holiday near a 5G Tower

Mona Nilsson, Lennart Hardell, Annals of Clinical and Medical Case Reports, published 02-Dec-2023

<https://acmcasereport.org/wp-content/uploads/2023/12/ACMCR-v12-2046-1.pdf>

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“Antennas emitting radiofrequency (RF) radiation for 5G wireless communication are being deployed since 2019/2020 in Sweden, although no studies are available on health impacts from the new 5G radiation. In five case reports published during 2023 we have described that persons living or working close to 5G base stations developed the microwave syndrome soon after installation of the base stations. In this new case report we describe a previously healthy family of a man, a woman and their three children that rapidly developed symptoms of the microwave syndrome after arriving at a summer cottage located at 125 meters distance from a mobile phone tower with 5G antennas. The most severe symptoms for the adults were sleeping problems, headache, tiredness, and irregular heartbeat. The children got sleeping problems, diarrhea, pain in the stomach, skin rashes, headache, and emotional symptoms. All the symptoms disappeared and health was restored when the family returned to their own house at another place with no 5G base stations. No measurements were available inside or outside the cottage during the time the family stayed near the mast. Later measurement showed that the radiation level varied from 9000 to 43400 $\mu\text{W}/\text{m}^2$ outside the cottage on the 5G base station side, compared with 2500 $\mu\text{W}/\text{m}^2$ at most within their regular home without a 5G base station nearby. However, during their stay it is likely that the radiation was higher due to more mobile phone users staying at this summer cottage area. This case report is in line with results from our previous case reports showing that 5G rather rapidly may cause ill health and that elimination or reduction of 5G exposure restores health back to normal.”

SUMMARY of CASE STUDIES published in 2023

Taken from **“Health Concerns of 5G and Setting Suitable Restrictions”** Michael Bevington (Chair of Trustees Electrosensitivity UK) International Journal of Research in Biological Sciences V1, Issue 1, 2024
https://www.journalserapublications.com/issues/v01/i01/JEPL_1020240101001.pdf

Table 1. Summary of health status, symptoms and distance from 5G antennas for the six studies published in 2023.

Study	1	2	3	4	5	6
<i>Published</i>	10 Jan.	4 Feb.	10 April	30 June	13 Nov.	2 Dec.
<i>Subjects, age (years)</i>	man 63, woman 62	man 57, man 42	woman 52	woman 55, man 20, woman 19	man 49	man 39, woman 39, children 8,6,4
<i>Health status</i>	previously healthy	previously healthy	previously healthy	previously healthy	previously healthy	previously healthy
<i>Hypersensitive</i>	no, no	no, no	no	no, no, possibly	no	no (all)
<i>Time to onset of symptoms</i>	'a couple of days'	'a couple of weeks'	(a) ~1 month (b) <14 days	~ 6 weeks (woman 55)	hour(s), <7 days	3 days
<i>Some severe symptoms</i>	fatigue, tinnitus, headaches, insomnia, dizziness, skin rashes, blood pressure disorder, nose bleeds	headaches, arthralgia, tinnitus, dizziness, concentration problems, fatigue, skin rashes, insomnia, anxiety	headaches, dizziness, concentration problems, memory loss, fatigue, anxiety, cough, nose bleeds, lung problem	insomnia, headaches, concentration problems, memory loss, skin rashes, irregular pulse, photophobia, anxiety	headaches, dysesthesia, memory loss, irregular pulse, high pulse, skin rashes, fatigue, insomnia	insomnia, headaches, fatigue, irregular pulse, dysesthesia, diarrhoea, irritability, breathless, skin rashes
<i>Distance from 5G antennas</i>	5 m	5 m – 20 m	60 m	50 m, 70 m	20 m	125 m

2024

CASE-STUDY #7

82yo woman with EHS (for 20 years) developed Microwave Syndrome after 5G base station installed near home

Lennart Hardell, Mona Nilsson, Journal of Environmental Science & Public Health, Published 09-Jan-2024
<http://www.fortunejournals.com/articles/a-woman-aged-82-years-with-electromagnetic-hypersensitivity-since-almost-four-decades-developed-the-microwave-syndrome-after-insta.html>
<https://www.fortunejournals.com/articles/a-woman-aged-82-years-with-electromagnetic.pdf>

“Installation of the fifth generation (5G) for radiofrequency radiation started in Sweden in 2019/2020. Since then there has been a rapid development of this technology in the whole country. In previous case reports we have presented persons that developed the microwave syndrome caused by the radiation after installation of 5G in their neighborhood.

Mostly these former healthy persons have tolerated previous generations such as 3G and 4G. After moving to another place without 5G the microwave syndrome disappeared in short time. Thus 5G seems to be a culprit for ill health, and these 5G exposure studies correspond to classic provocation tests on effects on well-being.

This article presents a woman aged 82 years with electromagnetic hypersensitivity (EHS) since almost four decades. After deployment of 5G base stations close to her living place she developed severe ill health including fatigue, dysesthesia, dizziness, balance disorder, and light sensitivity that all are included in the microwave syndrome. Also her 83 years old husband was affected, although to a minor extent.”

The woman developed aggravated symptoms, beginning around February/March 2023, inherent with the microwave syndrome shortly after installation of two 5G base stations in her neighborhood. These were provided by two different telecom companies.

Her 83-year-old husband with no previous EHS also developed symptoms known to be caused by RF radiation, although to a minor extent.

The couple lives in a one floor house with a cellar. The base stations are located at distances of 538 and 489 meters.

CASE-STUDY #8

8yo boy developed severe headache in school near 5G base station

Lennart Hardell, Mona Nilsson, Annals of Clinical and Medical Case Reports, Published 31-Jan-2024
<https://www.medtextpublications.com/open-access/an-eight-year-old-boy-developed-severe-headache-in-a-1582.pdf>

“In this case study we present an eight-year boy who developed severe headache, but also some fatigue and dizziness at school after the implementation of 5G base stations close to the school. The RF radiation varied at the schoolyard between 83,332 and 267,536 $\mu\text{W}/\text{m}^2$ and in the classroom including corridor between 2,560 and 76,590 $\mu\text{W}/\text{m}^2$. Considerably lower levels were found in the home varying from 25 to 1,040 $\mu\text{W}/\text{m}^2$. Protective clothes had a preventive effect on his symptoms. This case study is another example of the immediate need to halt the expansion of 5G and dismantle existing base stations.”

The school has a mobile phone tower with 5G base stations 200 meters from the school area and 285 meters from his classroom.

The tower has been at the same spot for around 10 years. 5G technology has been installed at the tower since 2022. The boy started at the school in August 2021.

Relatively soon after starting at the school, he started to suffer from headaches, although not every day or not even every week at first. However, during the autumn of 2023, the headache become daily and more intense at school, grade 10 on the 10-grade scale (0 corresponds to no discomfort, 10 to unbearable discomfort). He also experienced some fatigue (grade 5), and sometimes dizziness (grade 7) at school. He is symptom-free in general at home but may also occasionally have headache at home, (grade 2), but this headache disappears relatively quickly.

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Since autumn 2023, he has worn a protective cap (which shields against RF radiation) both outdoors and indoors in the classroom. Outdoors, he also uses a RF-protective jacket and scarf. With the protective cap, he has not suffered from headaches so far.

SUMMARY of first 7 CASE STUDIES

Summary of seven Swedish case reports on the microwave syndrome associated with 5G radiofrequency radiation, Lennart Hardell and Mona Nilsson, June-2024

https://www.degruyter.com/document/doi/10.1515/reveh-2024-0017/html?fbclid=IwY2xjawEgeVRleHRuA2FlbQlxMQABHZeG6ToEqT_w0ThGuEMZ-cMc73eAkUVGU7du8JNT-b8ZdK2CQOCr-Jz6TQ_aem_4esr7Pyje9k62298xdJ9tw

Published online by [De Gruyter](#) June 19, 2024

From the journal *Reviews on Environmental Health* (<https://doi.org/10.1515/reveh-2024-0017>)

This is an **excellent paper** written by Hardell and Nilsson, summarising their first 7 case studies

Abstract

“Most prevalent and severe were sleeping difficultly (insomnia, waking nighttime, early wake-up), headache, fatigue, irritability, concentration problems, loss of immediate memory, emotional distress, depression tendency, anxiety/panic, dysesthesia (unusual touched based sensations), burning and lancinating skin, cardiovascular symptoms (transitory high or irregular pulse), dyspnea, and pain in muscles and joints. Balance disorder and tinnitus were less prevalent. All these symptoms are included in the microwave syndrome.”

(“The microwave syndrome is a set of symptoms identified since 50–60 years as effects of exposure to RF radiation or microwaves at so called “low levels” or non-thermal levels”)

Conclusion

“Our seven case studies, comprising 16 persons, on health effects from real 5G RF radiation exposure, showed that the study persons developed the microwave syndrome after installation of 5G base stations in the neighborhood of their dwellings. **Most prevalent were symptoms of the nervous system:** sleeping problems, headache, fatigue, irritability, emotional symptoms and concentration/attention deficiency. **Very high RF radiation levels, although much lower than limits recommended by ICNIRP and the FCC were measured”**

Other useful articles

**** Experts Raise Public Health Fears About Microwave Syndrome From 5G Masts (Nov-2023)**

<https://dailysceptic.org/2023/11/15/experts-raise-public-health-fears-about-microwave-syndrome-from-5g-masts/>

The first 4 Hardell-Nilsson cases are discussed.

**** Are We Taking the Risks of 5G Seriously Enough? (26-Feb-2024)**

<https://dailysceptic.org/2024/02/26/are-we-taking-the-risks-of-5g-seriously-enough/>

Excellent article about the Hardell-Nilsson cases. Includes the 8 case studies to date.